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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,698	10/24/2003	Pierre Jallais	033818-018	6782

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EXAMINER

BELLINGER, JASON R

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/691,698

Applicant(s)

JALLAIS ET AL.

Examiner

Jason R Bellinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/22/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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***Allowable Subject Matter***

1. The indicated allowability of claims 1-4 is withdrawn in view of the newly discovered reference(s) to Sato et al. Rejections based on the newly cited reference(s) follow.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

3. The drawings were received on 22 July 2004. These drawings are approved.

***Specification***

4. The disclosure is objected to because of the following informalities: In line 10 of page 3, the zero (0) should be removed from the US Patent number to correctly refer to the patent.

Appropriate correction is required.

***Claim Objections***

5. Claim 1 is objected to because of the following informalities: A comma (,) should be inserted after the term "layer" in line 11 of the claim for clarity. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al in view of Cordonnier and in further view of Tsuruta et al. In figure 3, Sato et al shows a tire 21 having a radial carcass reinforcement 28 anchored in each bead 23 to an annular bead reinforcement element 22. Radially outwards of the carcass 28 is a crown reinforcement element 34 including two working crown plies (35 & 36) of metallic cables, which are crossed from one ply to the next (see Figure 2) and having respective widths at least equal to 50% of the width of the tread 25.

Radially outward of the working plies (35 & 36) are two protection plies (37 & 51) of metallic cable crossed from one ply to the next. The tread 25 includes an ungrooved portion (namely the area radially below the grooves 44) in which at least one armature reinforcement element is disposed. The armature includes two layers (38 & 52) with cords parallel to each other within each layer, the axial widths of the two layers (38 & 52) being at least equal to the width of a narrower one of the working plies (35 & 36).

The volume occupied by the elements of the reinforcement layers, per unit of axial width and per unit of circumferential length of the ungrooved portion of the tread

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25, is at most 20% of the total volume, with the volume of the rubber mixture making up the remainder, or 80% of the total volume.

Sato et al does not specify that the metallic cables of the working plies are inextensible, or the metallic cables of the protection plies being elastic. Cordonnier teaches the use of a tire having working plies (31-32) with metallic cables formed from inextensible steel, while the metallic cables in a protection ply 34 are formed from elastic steel. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the metallic cables of the working and protection plies of Sato et al from inextensible and elastic steels, respectively for the purpose of creating a tire having resilient and durable tread reinforcement.

Sato et al does not show the cables/cords of the armature plies being textile monofilaments formed of a polyamide. Tsuruta et al teaches the use of reinforcing elements 37 in each reinforcing ply being formed of an aramid fiber or monofilament. The textile monofilaments 37 are set at an angle between 50-60 degrees relative to the circumferential direction of the tire (see column 7, lines 8-13). Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the reinforcing cords of the armature layer of Sato et al from an aramid monofilament as a substitution of equivalent materials, dependent upon cost and availability.

***Response to Arguments***

8. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are considered to show tires having numerous belt reinforcement layers of varying widths. For example, Carr shows a tire of the type described above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R Bellinger whose telephone number is 703-308-6298. The examiner can normally be reached on Mon - Thurs (9:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger  
Examiner  
Art Unit 3617

  
jrb

  
S. JOSEPH MORANO  
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